

REMARKS

Claims 1-43 are pending and stand rejected in the final Office Action. No amendments are offered with this reply. Claims 1-43 remain pending.

CONSIDERATION AFTER FINAL REJECTION

Applicant respectfully submits consideration of the remarks after a final rejection is proper because the claims are in an allowable condition and require no further examination. Applicant respectfully requests that the rejections of record be withdrawn for the reasons discussed below. Alternatively, Applicant respectfully requests an Advisory Action stating whether the comments can be considered at the present time.

REJECTIONS OVER YOKOKAWA, OZAWA, EISINGA, DEANTONIS, AND KOLB

Sections 1-14 of the Office Action of December 5, 2007 repeat the rejections of Claims 1-43 over various combinations of *Yokokawa* and other references. In response, Applicant maintains his position that the claims are patentable over the reference for the reasons discussed in his Amendment filed August 30, 2007. Applicant wishes to incorporate those remarks here by reference, and respectfully requests the rejections be withdrawn on that basis.

In addition to relying on his remarks in the August 30, 2007 Amendment, Applicant offers the following additional comments in rebuttal to sections 18-19 of the Office Action, offering the Examiner's "Response to Argument" in respect of the August 30, 2007 Amendment.

Applicant did not impermissibly attack the references individually

First, the Examiner takes the position that the arguments are not persuasive because "one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references." Applicant agrees with the Examiner's statement of the rule, but

disagrees with its application. Applicant did not attack the references individually in the August 30, 2007 Amendment; rather, all of the rejections were traversed over a combination of the references. With the Examiner's indulgence, Applicant draws attention to the following passages from the August 30, 2007 Amendment (emphasis added throughout).

In section 2 discussing the 35 U.S.C. § 103(a) rejection of Claims 1, 4, 9-16, 18, 19, 35, 38, and 40-43 as unpatentable over the *Yokokawa* reference (U.S. Patent No. 4,094,949), in view of the *Ozawa* reference (U.S. Patent No. 5,910,544):

"The references, *even when combined*, do not disclose or suggest a key limitation of the rejected claims." (page 11, first full paragraph)

"As noted above, *Yokokawa* does not disclose any of the other claim steps... The *secondary Ozawa reference does not provide the missing element* of the claims." (page 11, last paragraph, and page 12, first paragraph)

"Because *the references when combined* do not contain every element of the rejected claims..., Applicant respectfully submits that his claims are patentable over the combined references." (page 12, last paragraph).

In section 3, discussing the rejection of Claims 2 and 3 over *Yokokawa* and *Ozawa* further in view of *Eisinga*:

"The *deficiencies of the combined references* are discussed above...The disclosure of *Eisinga* does not make up for those deficiencies."

Section 4 discussing the rejection of Claims 5-7 over *Yokokawa* and *Ozawa* further in view of *DeAntonis* (EP 0132583 A2):

"The *deficiencies of the combined references* are discussed in section 2 above. ...The *DeAntonis* reference does not make up for those deficiencies."

Section 5 discussing the rejection of Claim 8 further in view of the *Kolb* reference (U.S. Patent No. 3,884,877):

"The *deficiencies of the combined references* are discussed in section 2 above. Applicant respectfully submits that *Kolb* does not make up for those deficiencies."

Section 6, 7, and 8 contain similar language and will not be repeated here.

Section 9 discusses the obviousness rejection of Claims 22-26 and 28 over *Yokokawa* and further in view of *DeAntonis*:

“...the *combined references* do not disclose a key limitation of the rejected claims. ...Because the references even when combined fail to disclose each and every limitation of the claims, rejection under § 103 is improper.” (page 15, second paragraph)

“...the *combined references* do not supply a key element of the rejected claims.” (page 16, line 2)

Section 10, discussing the rejection of Claim 27 over *Yokokawa* and *DeAntonis* further in view of *Kolb*:

“The deficiencies of *the combined references* are described in section 9 above. ...Kolb does not make up for those deficiencies.”

Section 11 discussing the rejections of Claims 29-32 and 34 over *Yokokawa* in view of *Eisinga* (U.S. Patent No. 4,792,348) and *Ozawa*:

“The *Yokokawa* reference fails to disclose many features of the claims...the *Yokokawa* reference does not disclose...step (d) ‘completing the cure of said elastomer composition while in contact with the substrate’.

...Applicant respectfully submits that neither *Eisinga*, *Ozawa*, nor their combinations supply the missing elements of the claims. ...*Even were Eisinga to be combined* with the main reference, the combination will still not disclose several features of the amended claims.” (page 17, second and third paragraphs)

“Because *the references when combined* do not teach or suggest every element of the rejected claims,...the claims are patentable over the cited references.” (page 11, third paragraph)

Section 12 discussing the rejection of Claim 33 further in view of *Kolb*:

“The deficiencies of *the combined references* are discussed above in section 11. Applicant respectfully submits that *Kolb* does not overcome those deficiencies.”

Section 13 discussing the rejection of Claim 36 over *Yokokawa*, *Ozawa*, and *Eisinga*:

“The deficiencies of *the combined Yokokawa and Ozawa references* as applied to claim 35 as discussed above in section 2. ...Applicant respectfully submits that “in light of the demonstrated teachings of the references, their combination would not contain all of the limitations of rejected claim 36.”

Section 14 discussing the rejection of Claim 37 over *Yokokawa* and *Ozawa* and further in view of *DeAntonis*:

“The *deficiencies of the combined Yokokawa and Ozawa reference* as applied to claim 35 are discussed above in section 2. The *DeAntonis reference* does not makeup for those deficiencies. ...The ...*references alone or in combination* do not teach the limitations of the rejected claims.”

Section 15 discussing the rejection of Claim 9 over *Yokokawa*, *Ozawa*, and *Kolb*:

“The deficiencies of the combined references are discussed above. The *Kolb reference* does not make up for those deficiencies.”

On the basis of the discussion above, it is clear that Applicant did not traverse the rejections by attacking references individually. Rather, because the rejections were based on combinations of references, Applicant addressed his remarks to the teachings of the combined references. As permitted, Applicant also relied on several other passages of the reference (not quoted above) that tended to teach away from making the combination or modification as suggested by the Examiner.

The “heat treatment” taught by Ozawa supports patentability of the claims

In section 19 of the Office Action, as a further reason why Applicant’s remarks are not found persuasive, the Examiner notes that *Ozawa* is said to provide “heat treatment” on the article after placing the various layers together. As a result, the Examiner states that the reference as a whole therefore cannot be said to teach away from a step of crosslinking or vulcanization. In response, Applicant would like to consider the “heat treatment” teaching of *Ozawa* in its full context, consistent with the principle of reading the references in their entirety for what they teach to a person of skill in the art.

In this regard, attention is respectfully drawn to column 18 of the reference, referred to in section 19 of the Office Action:

“Next heat treatment, etc. is performed if necessary, then the result is cooled then finally the mandrel is pulled out, whereby the hose 20 of the present invention shown in Figs. 2(a) and 2(b) is obtained.

Note that, in the above production process of a hose, a mandrel was used, but in the low permeability of the hose present invention, there is no crosslinking process as required for the production for a normal rubber hose... .” *Emphasis added.*

Read in context, the teaching of “heat treatment” in column 18 of *Ozawa* is not a teaching of crosslinking or vulcanization. This is seen clearly because, in the very next paragraph, the *Ozawa* specification clarifies that even though a heat treatment is performed, it is to be understood that the production process involving heat treatment does not involve crosslinking.

On the basis of the above discussion, Applicant respectfully submits that the “heat treatment” of *Ozawa* does not contradict or make Applicant’s arguments less persuasive.

Applicant did not impermissibly attack DeAntonis individually

The Examiner continues in section 19 of the Office Action to state that Applicant did not consider the combination of references when it argued that the *DeAntonis* reference teaches only thermoplastics. Applicant believes the Examiner is referring to section 9 of the August 30, 2007 Amendment. Relevant portions of that section are quoted here for convenience.

In discussing the *DeAntonis* reference as a secondary reference, the August 30, 2007 amendment states:

“The secondary reference teaches coextrusion, but it does not supply the missing element of completing the cure of a coextruded partially cured dynamic vulcanizate after coextrusion. DeAntonis discloses methods of coextruding various fluorine containing and non-fluorine containing thermoplastic polymers, with adhesive layers between alternating thermoplastic layers. The reference does not disclose or suggest subsequent curing of the coextruded product. As a result, the combined references do not supply a key element of the rejected claims.”

From the above passage, it is clear that Applicant is traversing the application of the combination of *Yokokawa* and *DeAntonis* against Claims 22-26 and 28. Applicant merely points out that

DeAntonis doesn't teach cure because of the fact that it deals only with thermoplastics, which are not cured. As the above passage indicates, Applicant's argument is that combination with *DeAntonis* does not supply the missing element of the claims.

Indeed, Applicant discusses the *DeAntonis* teaching of coextrusion of thermoplastic layers and point out that for thermoplastics there can be no curing reactions. Applicant uses this fact to argue that *DeAntonis* either alone or in combination with a primary reference in fact teaches away from adding the missing element, which is curing of the polymeric material after extrusion.

On the basis of this discussion, Applicant respectfully submits that they have not improperly argued against the rejections by attacking the *DeAntonis* reference individually.

In paragraph c) of section 19 of the Office Action, the Examiner takes the position that Applicant's arguments are not persuasive for the further reason that the *Yokokawa* reference suggests a curing is performed after removal from the mixer. The Examiner states "in any process where the material is subsequently assembled into an article, it would have been obvious to vulcanize after assembly and after a cured mixture would have regained its resembled shape." Applicant respectfully submits that the above argument is conclusory rather than based on facts such as the teachings of the reference. Applicant respectfully submits the Examiner's position is not sound because it merely states its premise as a conclusion.

REJECTIONS OVER THE TAKEYAMA REFERENCE

Sections 15, 16, and 17 of the Office Action present new rejections of Claims 1, 10, 22, 29, and 35 as obvious over the *Takeyama* reference (U.S. Patent No. 6,079,465) in view of *Yokokawa* and *Ozawa*, discussed above. Applicant respectfully submits that the references are

improperly combined and applied against the claims. Accordingly, Applicant respectfully requests the rejection be withdrawn.

First, the claimed fluorocarbon elastomer is a non-obvious selection from the teaching of *Takeyama*. It must be noted that the reference discloses the use of fluorocarbon elastomers only in a laundry list of other possible rubbers for use in the air permeation prevention layer. *See* for example column 6, line 50 to line 7, line 15, suggesting essentially every rubber known to man for use in this permeation layer. Applicant respectfully submits that the long, long laundry list of rubbers does not make obvious a selection of a “fluoroelastomer” as recited in the claims. For this reason alone, Applicant respectfully submits that the claims are non-obvious in light of the reference.

Next, the *Takeyama* reference does not teach partial cure of the fluorocarbon elastomer, as recited in the claims. Necessarily, it does not disclose completing the cure while in contact with a substrate. Contrary to the position taken in the Office Action, any teaching to provide partial cure is found only in the current specification.

The *Takeyama* reference discloses making an “air permeation prevention layer” as part of a tire, and heating and vulcanizing the assembled green tire in accordance with an ordinary method to make a desired lightweight pneumatic tire. *See* for example, column 17, line 16-26. The reference teaches that the air permeation prevention layer can be made by a process of dynamic vulcanization. *See* column 10, lines 3-34. As noted in the Office Action, the *Takeyama* reference does not teach partially curing the elastomer composition by dynamic vulcanization. The dynamic vulcanization process described in column 10 of the reference does not amount to a teaching of partially curing as recited in the claims.

Thus, to arrive at the subject matter of the claims, the *Takeyama* reference needs to be modified to particularly select fluorocarbon elastomers in the first place, and then to prepare

them by the dynamic vulcanization taught in the reference, but to add the condition that vulcanization is carried out to a incomplete state, after which cure is completed while in contact with a substrate. Applicant acknowledges the Examiner's position that *Yokokawa* inherently discloses a partially vulcanized material. Combining with *Yokokawa* can thus arguably supply one missing condition of the claims. But *Yokokawa* does not provide, and *Ozawa* teaches away from, the second missing condition, that of curing after contact with a substrate. Attention is respectfully drawn to section 2 of the August 30, 2007 Amendment, where Applicant demonstrates the *Ozawa* reference teaches specifically not to vulcanize the composition while on the mandrel. Combining the features of the references as suggested in sections 15-17 of the Office Action can thus only be made by going against the teaching of the combined references, by using the current specification as a guide or road map for their combination.

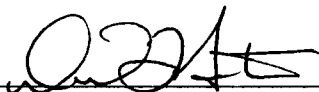
For these reasons, Applicant respectfully requests the rejections of the claims over the *Takeyama* reference be withdrawn. Applicant respectfully submits consideration after final rejection is proper because these remarks place the claims in an allowable condition and require no further examination, as they are based on the same arguments that Applicant has used against the other rejections.

CONCLUSION

For the reasons discussed above, Applicant believes that Claims 1-43 are in an allowable condition and respectfully requests a Notice of Allowance. Reconsideration after final is proper because the arguments place the claims in allowable condition. The Examiner is invited to telephone the undersigned if that would be helpful to resolving any issues.

Respectfully submitted,

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